

Title (en)

Engine variable valve timing mechanism

Title (de)

Variable Ventilsteuerungsvorrichtung für Brennkraftmaschine

Title (fr)

Dispositif variable de commande des soupapes d'un moteur à combustion interne

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Application

EP 97105771 A 19970408

Priority

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Abstract (en)

[origin: EP0801212A1] A variable valve timing mechanism is provided at the distal end of a camshaft (14; 25; 39; 55) for changing a valve timing of an engine valve (77). A rotor (11; 22; 52) is fixed to the distal end face of the camshaft (14; 25; 39; 55), and the rotor has four vanes (112; 222; 522) protruding radially outward. A housing (12; 24; 54) is disposed to surround the rotor (11; 22; 52) to be rotatable relative to the rotor (11; 22; 52) and the camshaft (14; 25; 39; 55), and the housing (12; 24; 54) has recesses (122; 242; 542) on the inner circumference. Each recess (122; 242; 542) is divided by the vane (112; 222; 522) into a first pressure chamber (101) and a second pressure chamber (102). A first passage (145; 255; 555) is defined in the camshaft (14; 25; 39; 55), for supplying a hydraulic fluid pressure to the first pressure chamber (101) so as to change the rotational phase of the second rotor (12; 13; 21, 23, 24; 51, 53, 54) with respect to the camshaft (14; 25; 39; 55), and the first passage (145; 255; 555) has an opening at the distal end face of the camshaft (14; 25; 39; 55). A second passage (148; 258; 558) is defined in the camshaft (14; 25; 39; 55), for supplying a fluid pressure to the second pressure chamber (102) so as to change the rotational phase of the second rotor (12, 13; 21, 23, 24; 51, 53, 54) with respect to the camshaft (14; 25; 39; 55), and the second passage (148; 258; 558) has an opening at outer circumference (149; 231) of the camshaft (14; 25; 39; 55). <IMAGE>

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